

**Cookson Electronics**

A Division of Cookson Group plc

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Revised 11/13/03
Replaces 8/01/03
Printed 8/03/05
MSDS ID: FT017

MATERIAL SAFETY DATA SHEET

Cookson Electronics
Assembly Materials
4100 Sixth Avenue
Altoona, PA 16602
(814) 946-1611
(814) 944-8094 fax
www.cooksonelectronics.com

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: WATER FLOW FLUX/OA

MANUFACTURER'S NAME: COOKSON ELECTRONICS ASSEMBLY MATERIALS GROUP
ADDRESS: 4100 6th AVENUE

ALTOONA, PA 16602

TRANSPORT EMERGENCY #: CHEMTREC: 1-800-424-9300

BUSINESS PHONE: 1-814-946-1611

2. INGREDIENT AND EXPOSURE LIMIT INFORMATION

CHEMICAL NAME	CAS #	% W/W	OSHA PEL - TWA
OCTYLPHENOXY-POLYETHOXYETHANOL SURFACTANT	9004-87-9	10 - 20	N/E
ETHOXYLATED ALIPHATIC ALCOHOL	9003-11-6	30 - 35	N/E
AMINE HYDROCHLORIDE	2002-24-6	5 - 8	N/E
POLYETHYLENE GLYCOL	25322-68-3	75 - 90	N/E

PRODUCT CONTAINS ONE OR MORE OF THE ABOVE LISTED CHEMICALS IN VARYING PERCENTAGES. SEE PRODUCT LABEL FOR EXACT COMPOSITION.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: MODERATE EYE IRRITANT. WILL NOT BURN. TOXIC BY INHALATION. GASTROINTESTINAL TRACT IRRITANT. RESPIRATORY TRACT IRRITANT. CAUSES SKIN IRRITATION.

HMIS RATING SYSTEM:

Health: 2 ; Flammability: 1 ; Reactivity: 0 ; Protection: C

NFPA RATING SYSTEM:

Health: 2 ; Flammability: 1 ; Reactivity: 0

ROUTES OF ENTRY: INHALATION; INGESTION; SKIN CONTACT; EYE CONTACT; ABSORPTION.

TARGET ORGANS: LIVER, KIDNEYS AND LUNGS

IMMEDIATE (ACUTE) SYMPTOMS OVER-EXPOSURE BY ROUTE OF EXPOSURE:

INHALATION: CAN CAUSE MODERATE RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA AND HEADACHE.

EYES: CAN CAUSE MODERATE IRRITATION, TEARING AND REDDENING, BUT NOT LIKELY TO PERMANENTLY INJURE EYE TISSUE.

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3. HAZARDS IDENTIFICATION (Cont.)

SKIN CONTACT: CAN CAUSE SLIGHT IRRITATION.
INGESTION: IRRITATING TO MOUTH, THROAT, AND STOMACH. CAN CAUSE
ABDOMINAL DISCOMFORT, NAUSEA, VOMITING AND DIARRHEA.

LONG TERM (CHRONIC) HEALTH EFFECTS:

REPRODUCTION: SEE SECTION 11 OF THIS MSDS.
MUTAGENICITY: SEE SECTION 11 OF THIS MSDS.

4. FIRST AID MEASURES

SKIN EXPOSURE: WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND
LAUNDER. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR
PERSISTS.
EYE EXPOSURE: FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 20 MINUTES
RETRACTING EYELIDS OFTEN. TILT THE HEAD TO PREVENT CHEMICAL
FROM TRANSFERRING TO THE UNCONTAMINATED EYE. GET IMMEDIATE
MEDICAL ATTENTION.
INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, HAVE A
TRAINED INDIVIDUAL ADMINISTER OXYGEN. IF NOT BREATHING, GIVE
ARTIFICIAL RESPIRATION AND HAVE A TRAINED INDIVIDUAL
ADMINISTER OXYGEN. GET MEDICAL ATTENTION IMMEDIATELY
INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY.
NOTES TO DOCTOR: NO ADDITIONAL FIRST AID INFORMATION AVAILABLE

5. FIRE FIGHTING MEASURES

FLAMMABILITY SUMMARY: NOT COMBUSTIBLE
FLASH POINT: 400 DEGREE (ESTIMATED)
AUTOIGNITION TEMPERATURE: N/E
EXPLOSIVE LIMITS % IN AIR: N/E
FIRE FIGHTING METHODS: WILL NOT BURN, NO SPECIAL INSTRUCTIONS AVAILABLE.
USE METHODS APPROPRIATE FOR SURROUNDING
MATERIALS.
HAZARDOUS COMBUSTION PRODUCTS: TOXIC FUMES

6. ACCIDENTAL RELEASE MEASURES

PRECAUTIONS AND EQUIPMENT: EXPOSURE TO THE SPILLED MATERIAL MAY BE IRRITATING
OR HARMFUL. FOLLOW PERSONAL PROTECTIVE EQUIPMENT
RECOMMENDATIONS FOUND IN SECTION VIII OF THIS
MSDS.
METHODS FOR CLEAN-UP: WEAR COMPLETE AND PROPER PERSONAL PROTECTIVE

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6. ACCIDENTAL RELEASE MEASURES (Cont.)

EQUIPMENT FOLLOWING THE RECOMMENDATION OF SECTION
VIII GATHER AND STORE IN A SEALED CONTAINER
PENDING A WASTE DISPOSAL EVALUATION. DO NOT USE
BROOM OR AIR CLEANING ETC.
ABSORB WITH AN INERT MATERIAL SUCH AS SODA ASH.

7. HANDLING AND STORAGE

HANDLING MEASURES: HARMFUL OR IRRITATING MATERIAL. AVOID CONTACTING AND AVOID
BREATHING THE MATERIAL. USE ONLY IN A WELL VENTILATED
AREA.
AS WITH ALL CHEMICALS, GOOD INDUSTRIAL HYGIENE PRACTICES
SHOULD BE FOLLOWED WHEN HANDLING THIS MATERIAL. AVOID
CONTACT WITH MATERIAL, AVOID BREATHING DUSTS OR FUMES, USE
ONLY IN A WELL VENTILATED AREA. WASH THOROUGHLY AFTER
HANDLING; WASH HANDS BEFORE EATING; DO NOT GET IN EYES,
ON SKIN AND CLOTHING; MINIMIZE DUST GENERATION AND
ACCUMULATION; REMOVE CONTAMINATED CLOTHING AND WASH
BEFORE REUSE.

STORAGE MEASURES: NO SPECIAL REQUIREMENTS
STORE IN A TIGHTLY CLOSED CONTAINER; KEEP AWAY FROM FOOD
AND DRINKING WATER. STORE IN A COOL DRY PLACE; KEEP AWAY
FROM HEAT, SPARKS, AND FLAME.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING MEASURES: USE LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING
CONTROLS TO MINIMIZE EXPOSURES AND MAINTAIN OPERATOR
COMFORT.
ENGINEERING CONTROLS MUST BE DESIGNED TO MEET THE
OSHA CHEMICAL SPECIFIC STANDARD IN 29 CFR 1910.
VENTILATION IS REQUIRED TO MAINTAIN OPERATOR EXPOSURE
BELOW PUBLISHED EXPOSURE LIMITS. USE PROCESS
ENCLOSURES, LOCAL EXHAUST VENTILATION, OR OTHER
ENGINEERING CONTROLS TO CONTROL AIRBORNE LEVELS BELOW
RECOMMENDED EXPOSURE LIMITS; EXPLOSION PROOF EXHAUST
VENTILATION SHOULD BE USED. FACILITIES STORING OR
USING THIS MATERIAL SHOULD BE EQUIPPED WITH AN
EYEWASH AND SAFETY SHOWER.

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION MAY BE REQUIRED TO AVOID
OVEREXPOSURE WHEN HANDLING THIS PRODUCT. GENERAL OR
LOCAL EXHAUST VENTILATION IS THE PREFERRED MEANS OF
PROTECTION. USE A RESPIRATOR IF GENERAL ROOM
VENTILATION IS NOT AVAILABLE OR SUFFICIENT TO
ELIMINATE SYMPTOMS.
FOLLOW A RESPIRATORY PROTECTION PROGRAM THAT MEETS 29

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (Cont.)

CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS WHENEVER
WORK PLACE CONDITIONS WARRANT THE USE OF A
RESPIRATOR. WEAR A NIOSH APPROVED RESPIRATOR IF ANY
EXPOSURE IS POSSIBLE.

EYE PROTECTION: WEAR CHEMICALLY RESISTANT SAFETY GLASSES WITH SIDE
SHIELDS WHEN HANDLING THIS PRODUCT. DO NOT WEAR
CONTACT LENSES.

SKIN PROTECTION: WEAR GOGGLES AND A FACE SHIELD
WEAR PROTECTIVE GLOVES. INSPECT GLOVES FOR CHEMICAL
BREAK-THROUGH AND REPLACE AT REGULAR INTERVALS. CLEAN
PROTECTIVE EQUIPMENT REGULARLY. WASH HANDS AND OTHER
EXPOSED AREAS WITH MILD SOAP AND WATER BEFORE EATING,
DRINKING, AND WHEN LEAVING WORK
WHERE CONTACT IS LIKELY, WEAR CHEMICAL RESISTANT
GLOVES, A CHEMICAL SUIT, RUBBER BOOTS, AND CHEMICAL
SAFETY GOGGLES PLUS A FACE SHIELD

CONTROL PARAMETERS: -----ACGIH EXPOSURE LIMITS-----
CHEMICAL NAME TLV-TWA STEL CEILING

9. PHYSICAL AND CHEMICAL PROPERTIES

COLOR: GREY
ODOR: NONE
pH: N/A
SOLUBILITY IN WATER: 100%

OTHER PHYSICAL AND CHEMICAL PROPERTIES DEPEND ON ALLOY COMPOSITION.

10. STABILITY AND REACTIVITY

DECOMPOSITION PRODUCTS: TOXIC FUME
INCOMPATIBLE MATERIALS: PEROXIDES; METALS; STRONG ACIDS; STRONG OXIDIZING
AGENTS; STRONG REDUCING AGENTS; ACIDS; CHLORINE;
MOISTURE; STRONG ALKALIES

CONDITIONS TO AVOID: NONE KNOWN
CONTAMINATION; CONTACT WITH AIR. CONTACT WITH
WATER

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11. TOXICOLOGICAL INFORMATION

INHALATION AND INGESTION: INGESTION OF FUME MUST BE AVOIDED
THIS PRODUCT MAY CONTAIN RESIDUAL (LESS THAN 100 ppm) CONCENTRATIONS OF ETHYLENE
OXIDE. ETHYLENE OXIDE CAUSES TUMORS IN LABORATORY ANIMALS.

12. ECOLOGICAL INFORMATION

OVERVIEW: ECOLOGICAL HAZARD. IN HIGH CONCENTRATIONS, THIS PRODUCT MAY
BE DANGEROUS TO PLANTS AND/OR WILDLIFE.

13. DISPOSAL CONSIDERATIONS

WASTE DESCRIPTION: SPENT OR DISCARDED MATERIAL IS PROBABLY A HAZARDOUS WASTE.

DISPOSAL METHODS: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, LOCAL OR
PROVINCIAL LAWS AND REGULATIONS.

14. TRANSPORT INFORMATION

SHIPPING BASIC DESCRIPTION: CONSULT LABEL OR MANUFACTURER FOR ADDITIONAL INFO.

15. REGULATORY INFORMATION

TSCA STATUS: ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY
OF EXISTING CHEMICAL SUBSTANCES.

REGULATED CHEMICALS:

CHEMICAL NAME

REGULATION

16. OTHER INFORMATION

The information contained herein is based on data considered accurate.
However, no warranty is expressed or implied regarding the accuracy of these
data or the results to be obtained from the use thereof. Additionally, Alpha
Metals, Inc. assumes no responsibility for injury to the vendee or third
persons proximately caused by the material even if reasonable safety
procedures are followed. Furthermore, vendee assumes the risk in his use of
the material.